

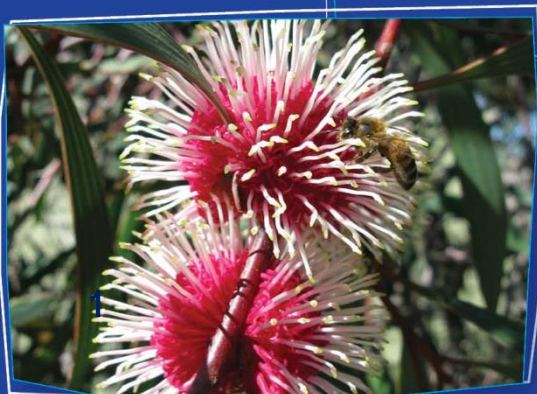
Environmental Considerations Report

Johns-Ocean-Parsons streets sand extraction site



Julie Waters – BEnvSc (Hons)

June 2019



1 Executive Summary

In June 2019 the Shire of Esperance applied for Purpose Permit to clear 2.26 hectares of remnant vegetation in an area bounded by Ocean st, Johns st and Parsons St Sinclair. The site consisted of the following locations;

- Lots 61-70 Pln 2260 Parsons street, Sinclair;
- Lots 78- 87, Pln 2260 Ocean Street Sinclair;
- Lots 73 -77 Pln 2260 Johns street, Sinclair.
- Parsons Street Road reserve, Johns street Road reserve, Ocean Street road reserve, as well as undeveloped road reserve

2 Introduction

The Shire of Esperance plans to level the above mentioned blocks for housing development and use the sand extracted for the Esperance foreshore sand nourishment project, an ongoing annual sand nourishment program to address coastal erosion experienced in Reserve 27318, located on Norseman Road Esperance near the Esperance Seafront Caravan Park. The erosion is an annual occurrence and the Shire of Esperance has been undertaking Sand Renourishment in conjunction with Department of Transport for the past 10 + years. The sand renourishment program was agreed to by the Department of Transport and the Shire of Esperance as the best management option for this section of coast. Sourcing the sand close to site considerably reduces costs of this program and the purpose permit site would mean a cartage distance of only 4.4km.



Figure 1. Location of permit area in red in the Esperance suburb of Sinclair..

3 Methodology

A flora survey was undertaken following the Environmental Protection Authority (EPA) Technical Guidance, Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia (2016). The flora survey occurred on 17/6/2019, by Shire of Esperance Environmental Officer Julie Waters. Julie Waters has over 15 years' experience doing flora surveys and 12 years working in the Esperance area.

Prior to the field survey, the area was assessed using the WALGA Environment Planning Tool, Desktop Assessment for Native Vegetation Clearing Permits and various Shire of Esperance spatial datasets.

The area was surveyed on foot, and a species list was compiled of all species present. Species were identified using local botanical knowledge, DBCA Esperance District Herbarium, Florabase and field guides.

4 Results

The desktop survey results from WALGA's Environmental planning tool are included in Appendix 1.

4.1 Soils and Topography

The site is located on the boundary of Tooregullup 5 Subsystem and Tooregullup 1 Subsystem

Tooregullup 5 Subsystem consists of: Level plain with moderately inclined dune ridges and associated swales with occasional swamps. Calcareous deep sands associated pale deep sands and minor calcareous shallow sands.

Tooregullup 1 Subsystem consists of: Quaternary sand deposits usually calcareous with headlands of Archean granite and gneiss. Calcareous deep sands associated calcareous shallow sand, pale deep sands with minor pale shallow sand and bare rock.

The area consists of sand dunes (highest point 21.45m AHD down to 7.21m AHD). The dune ridge lies across the middle of the application area in an east-west direction. No exposed rock is present and based on the vegetation, the sand is deep.

4.2 Vegetation description

The desktop results using WALGA Environment planning tool and Shire of Esperance Muir Soil and vegetation descriptions described the area as being in the Recherche IBRA subregion. Shrublands; mallee & acacia scrub on south coastal dunes and Shrub-heath of *Scaevola crassifolia* also shrubland of *Acacia cyclops* and *Banksia speciosa*. The site inspection determined the vegetation was Acacia shrubland with *Temptonia retusa* and *Spyridium globulosum* on coastal dunes. The site was last burnt in 2013.

Only 47.47% of remnant vegetation remains within 10km of the selected area (WALGA Environment planning tool). The site is within the South Coast Macro Corridor.

Despite there being a large number and variety of weeds around the edges of the application area, in whole the area could be considered to be in good condition (Keighery, 1994), with the edges almost totally degraded as well as the northern and western sections, however and some parts (including some previously disturbed areas are in very good condition vegetation in the and eastern portion of the area. There has been historic sand extraction at the site.



Figure 2. 2010 Aerial photograph of site showing areas of historic sand extraction and disturbance.

4.3 Declared Rare and Priority Flora

One species of Declared Rare Flora (DRF) and 15 priority flora as present within in a 20 km radius of the site, and therefore possible to be present within the clearing permit area (Table 1).

Table 1. Rare and Priority flora species identified within a 20 km radius of the site.

Species	Conservation Status
<i>Banksia prolata subsp. calcicola</i>	P4
<i>Dampiera sericantha</i>	P1
<i>Daviesia pauciflora</i>	P3
<i>Eucalyptus famelica</i>	P 3
<i>Eucalyptus foliosa</i>	P 1
<i>Eucalyptus insularis</i>	DRF - Endangered
<i>Galium leptogonium</i>	P 3
<i>Grevillea baxteri</i>	P 4
<i>Hibbertia carinata</i>	P 1
<i>Hibbertia turleyana</i>	P 2
<i>Kennedia becxiana</i>	P 4
<i>Lepidium fasciculatum</i>	P 1
<i>Leucopogon apiculatus</i>	P 3
<i>Leucopogon corymbiformis</i>	P 2
<i>Leucopogon rotundifolius</i>	P 3
<i>Velleia exigua</i>	P 2

The vegetation consisted of coastal acacia scrubland dominated by *Acacia cyclops*, *Acacia cochlearlis* and *Melaleuca pentagona* away from the coast. Closer to the coast and on exposed dunes this changed to being dominated by *Acacia cochlearlis*, *Scaevola crassifolia* and *Olearia axillaris*. Weeds were minimal and restricted to the edge of Wylie Bay road and along coastal tracks. The vegetation would be classified as being in excellent condition (Keighery, 1994).

In total, 25 species were identified within the clearing permit area, 10 of which were weed species (Table 2). All species were common to Esperance area. The species are not from Proteaceae family and thus the vegetation could not be considered as meeting the 'Proteaceae Dominated Kwongan Shrublands of the Southeast Coastal Floristic Province of Western Australia' Threatened Ecological Community diagnostic characteristics and condition thresholds.

Table 2. Species identified during site visit

Genus	Species
Aizoaceae	<i>Carpobrotus virescens</i>
Anacardiaceae	* <i>Schinus terebinthifolia</i> Brazilian Pepper Tree
Asteraceae	* <i>Gazania linearis</i>
Apiaceae	* <i>Foeniculum vulgare</i> Fennel
Apocynaceae	<i>Alyxia buxifolia</i> Dysentery Bush
Asparagaceae	* <i>Asparagus asparagoides</i> Bridal Creeper
Chenopodiaceae	<i>Rhagodia bacata</i> Berry saltbush
Cupressaceae	<i>Callitris preissii</i> Rottnest Island Pine
Cyperaceae	<i>Ficinia nodosa</i> , Knotted Club Rush
	<i>Lepidosperma gladiatum</i> Coastal Sword Sedge
Euphorbiaceae	* <i>Ricinus communis</i> Castor Oil Plant
Fabaceae	<i>Acacia cochlearis</i>
	<i>Acacia cyclops</i>
	<i>Acacia saligna</i>
	<i>Templetonia retusa</i> Cockies Tounge
Geraniaceae	* <i>Pelagonium capitatum</i> Rose Pelargonium
Myrtaceae	* <i>Eucalyptus gomphocephala</i> Tuart
	* <i>Leptospermum laevigatum</i> Victorian teatree
	<i>Melaleuca pentagona</i>
Pittosporaceae	<i>Billardiera fusiformis</i> Australian Bluebell
Poaceae	* <i>Cenchrus clandestinus</i> Kikuyu Grass
	* <i>Stenotaphrum secundatum</i> Buffalo Grass
Santalaceae	<i>Exocarpus sparteus</i>
Thymelaeaceae	<i>Pimelea ferruginea</i>
Rhamnaceae	<i>Spyridium globulosum</i> Basket Bush

4.4 Rare Fauna

The site is within the 'Confirmed' roosting area buffer for Carnaby's cockatoo (*Calyptorhynchus latorostris*). Whilst none were observed during the site visit (or ever observed by Julie Waters driving past the site which is near her home), it is possible that Carnaby's Black Cockatoo, may roost in the Tuarts on Lot 4 Parsons street, Lot 6 Parsons street and Lot 39 Johns street. During the site visit a variety of birds were using the site as observed by abundant bird chatter.

5 Discussion

The 2.26ha sand extraction site surrounded by Johns street, Ocean street and Parsons street is a previously disturbed area of coastal scrub. Being a small area of remnant vegetation it is threatened by weed invasion already evident along the edges and in the north western corner of the remnant. This threat is exacerbated by increased threat of frequent deliberately lit fires and dumping of garden refuse, being close to residential areas.

Whilst it does contain habitat for birds in an urban landscape, these habitats can be re-created in residential gardens once the area is built on, due to the reasonably large block sizes.

No threatened flora, priority flora or threatened ecological communities will be impacted upon by the proposed clearing.

6 References

Environmental Protection Authority (EPA) Technical Guidance, Terrestrial Flora and Vegetation Surveys for Environmental Impact Assessment in Western Australia (2016).

7 Appendix

7.1 Environmental Planning Considerations Report



Environmental Planning Considerations Report



Report generated: Tue Jun 25 12:37:37 AEST 2019 by 1

Reports are generated only for datasets covering the selected area. Absence of threatened flora, fauna and ecological communities records within a selected area does not necessarily mean those features are not present. See further information on how to interpret the datasets in the Explanatory Notes.

[Site Details](#) | [Environmental Considerations](#) | [Priorities for Further Investigation](#) | [Additional Considerations](#) | [Administrative Boundaries](#) | [Environmental Policy](#)

3 Site Details

Summary

If any of the listed matters are mapped in or within a defined buffer of the selected area read corresponding section in this report for details or seek further advice. 'No data' status indicates there is no data recorded in the system. Confirmation may require field survey.

Environmental Matters Requiring Further Investigation	Status
Environmentally Sensitive Area *	No data
Native vegetation **	Yes
Threatened ecological communities - Commonwealth listed	Yes
Threatened ecological communities - State listed	Yes
Priority ecological communities	No data

Threatened Flora - within the selected area	No data
Threatened Flora - within the buffer of selected area	No data
Threatened Fauna - within the selected area	No data
Threatened Fauna - within the buffer of selected area	Yes
Priority Flora or Fauna - within the selected area	No data
Priority Flora or Fauna - within the buffer of selected area	Yes
Mapped as potential fauna habitat	Yes
Wetlands	No data
Ecological linkages	Yes
Adjoining a conservation area	No
Environmental Policy and other relevant matters	Status
Acid Sulfate Soils	No data
EPA Policy Area	No
Public Drinking Water Source Area	Yes
Waterways Conservation Act Management Areas	No
CAWSA Part II Clearing Control Catchments	No

RIWI Groundwater Areas	Yes
RIWI Surface Water Areas	No
Swan River Trust Development Control Area	No
Bush Forever	No
Regional Park	No
Department of Aboriginal Affairs Sites and Other Heritage Places	No data
Contaminated sites	No data
Bushfire Prone Area	Yes
Local Government Specific Information	Status
Local Biodiversity Strategy	No

* No exemptions for clearing of native vegetation apply.

** Note vegetation extent mapping does not show small patches, some wetlands and native trees. Confirm presence/absence via aerial photography or site visit.

Legend

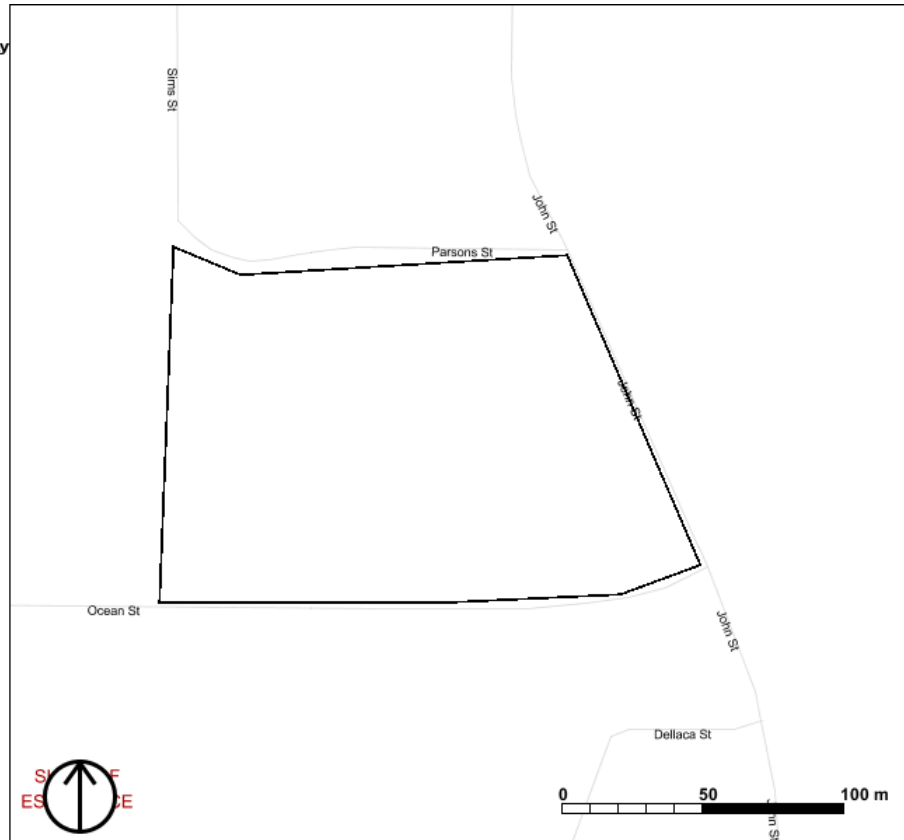
Local Government Authority



State Roads



Other Roads



3.1 Area

Selected Area Description

1 selected annotations.

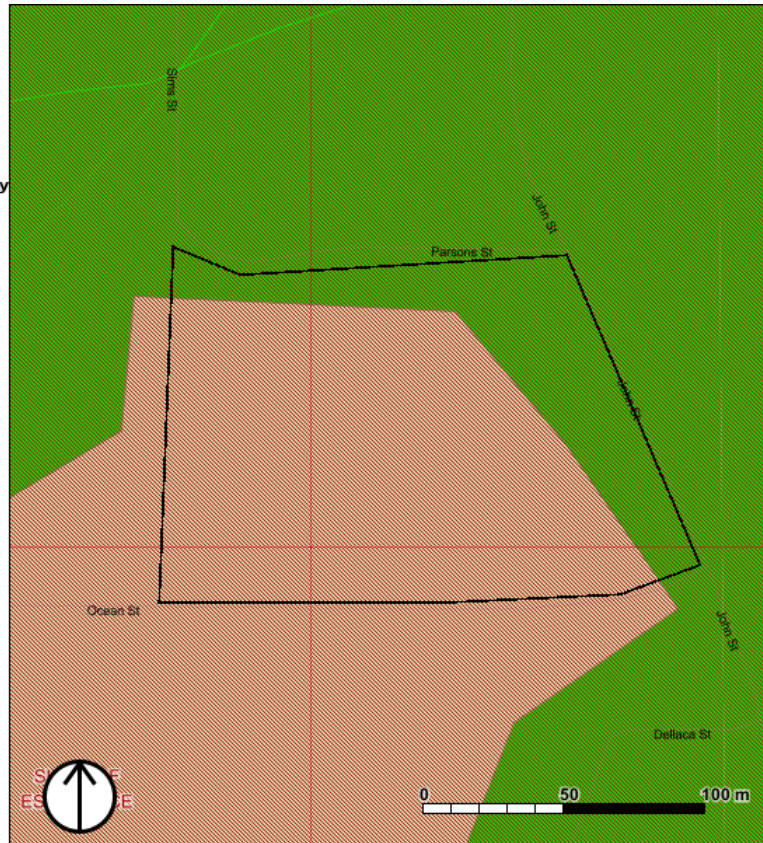
Calculated area: 1.99 ha

4 Environmental Considerations

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Legend

- Threatened and Priority Flora**
 -
- WA Herbarium Records**
 -
- Threatened and Priority Fauna**
 -
- Threatened and Priority Ecological Community**
 - ▨ Priority
 - ▨ Threatened
- Local Government Authority**
 -
- State Roads**
 -
- Other Roads**
 -
- Remnant Vegetation by Beard Association**
 - Zoom in to see remnant vegetation labelled by Beard Association
- South Coast Macro Corridor Zones**
 - Strategic Zone A
 - Strategic Zone B
 - Zone C
- Coast and Sea**
 - water
 - land



4.1 Threatened flora, fauna and ecological communities

To search for Matters of National Environmental Significance that might occur in the area of your interest go to [Protected Matters Search Tool](#) available through the Department of Environment.

For parts of the State with poor data coverage, additional information might be found by searching the Department of Water and Environmental Regulations online portal, [Index of Biodiversity Surveys for Assessments](#) which provides access to information about land-based surveys in Western Australia. IBSA can be searched by geographic regions.

4.1.1 Threatened and Priority Listed Flora

Records of Threatened and/or Priority Listed Flora are available for the selected area. Threatened flora are protected and cannot be removed without ministerial consent. Advice should be sought from the Department of Biodiversity, Conservation and Attractions before development occurs on this site.

The following DBCA records are within 20km of the selected area. Use the information to seek advice from the Department of Biodiversity, Conservation and Attractions:

Population ID - Conservation Status

104822 - Priority 4
104823 - Priority 4
96165 - Priority 4
96166 - Priority 4
89078 - Priority 2
90511 - Priority 3
89170 - Priority 2
94978 - Priority 2
104262 - Priority 2
98938 - Priority 4
98939 - Priority 4
96832 - Priority 3
96824 - Priority 3
93247 - Priority 1
88291 - Priority 3
104263 - Priority 2
104264 - Priority 2
94979 - Priority 2

The following WA Herbarium records are within 20km of the selected area. Use the information to seek advice from the Department of Biodiversity, Conservation and Attractions:

Sheet Number - Conservation Status

8935556 - 3
7347464 - 3
7347472 - 3
6586155 - 3
7360177 - 3
7360169 - 3
6586147 - 3
8179824 - 3
8187592 - 4
1108743 - 4
4347625 - 4
4669185 - 4
4669193 - 4
5132347 - 4
4228839 - 4
4228812 - 4
4228820 - 4
6037968 - 4
7782209 - 4
4634888 - 4
8359695 - 3
8417008 - 2
4367251 - 1
1017608 - 3
6597351 - 3
8343284 - 3
8288976 - 3

5316715 - 3
5282268 - 3
7016654 - 3
8258295 - 3
8289034 - 3
1232878 - 3
8428697 - 2
8646783 - 3
1362194 - 4
1077465 - 4
4999312 - 2
6458106 - 2
1407716 - 3
6797059 - 3
6797067 - 3
6586104 - 3
3248313 - 3
8238693 - 2
8236259 - 2
7424957 - 2
7424949 - 2
6597343 - 2
5532744 - 3
5995485 - 2
8416958 - 3
1066005 - 3
6833381 - 1
7867344 - 2
7867360 - 2
1108735 - 4
8273812 - 2
6957765 - 2
6772889 - 2
8273952 - 3
5644968 - 3
6772595 - 3
8507090 - 3
6772587 - 3
6762603 - 4
5239915 - 3
1388843 - 3
8330603 - 3
8258147 - 3
4111338 - 3
8387095 - 3
8438722 - 3
8438005 - 3
8289107 - 3
8341052 - 1
1461478 - 4
7409141 - 3
8387184 - 2
6458157 - 2
6458122 - 2

6458114 - 2
7408773 - 2
6458092 - 2
8437971 - 3
8347476 - 2

Key to the Conservation Status:

CR = Critically Endangered

EN = Endangered

VU = Vulnerable

EX = Extinct

1 = Priority 1: Poorly Known Taxa

2 = Priority 2: Poorly Known Taxa

3 = Priority 3: Poorly Known Taxa

4 = Priority 4: Rare Taxa

4.1.3 Threatened and Priority Fauna and Fauna Habitat

Records of Priority or Threatened Fauna are available for the selected area. Advice should be sought from the Department of Biodiversity, Conservation and Attractions before development occurs on this site.

The following protected fauna species have been recorded within 20km of the selected area. Use the information to seek advice from the Department of Biodiversity, Conservation and Attractions:
Database Number - Class Name (DBCA Listing, Ranking)

- 2248 - BIRD (IA)
- 79 - BIRD (IA)
- 80 - BIRD (IA)
- 0 - BIRD (VU & IA)
- 0 - BIRD (VU & IA)
- 0 - BIRD (IA)
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- 21691 - BIRD (P4)
- 0 - BIRD (IA)
- 75716 - BIRD (EN)
- 89203 - BIRD (EN)
- 89204 - BIRD (EN)
- 89208 - BIRD (EN)
- 89209 - BIRD (EN)
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- 0 - BIRD (IA)
- 22051 - BIRD (P4)
- 22052 - BIRD (P4)
- 0 - BIRD (VU & IA)
- 316 - BIRD (VU & IA)
- 317 - BIRD (VU & IA)
- 318 - BIRD (VU & IA)
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10450 - FISH (VU)
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18593 - BIRD (VU)
3276 - BIRD (VU)
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0 - BIRD (IA)
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21697 - BIRD (P4)
21698 - BIRD (P4)
21699 - BIRD (P4)
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21706 - BIRD (P4)
21707 - BIRD (P4)
22034 - BIRD (P4)
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22042 - BIRD (P4)
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3239 - BIRD (P4)
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80761 - BIRD (EN)
89210 - BIRD (EN)
89211 - BIRD (EN)
89212 - BIRD (EN)
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10278 - BIRD (VU)
10279 - BIRD (VU)
10282 - BIRD (VU)
10285 - BIRD (VU)
19057 - MAMMAL (P4)
3230 - BIRD (P4)
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21708 - BIRD (P4)
21709 - BIRD (P4)
21710 - BIRD (P4)
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22053 - BIRD (P4)
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3251 - BIRD (P4)
3689 - BIRD (P4)
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24091 - BIRD (EN)
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24095 - BIRD (EN)
80457 - BIRD (EN)
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84594 - BIRD (EN)
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0 - BIRD (P4)
19056 - MAMMAL (P4)
0 - BIRD (IA (& VU at subsp. level))
0 - BIRD (P4)
0 - BIRD (IA)
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0 - BIRD (IA)
350 - BIRD (VU & IA)
414 - BIRD (VU & IA)
415 - BIRD (VU & IA)
416 - BIRD (VU & IA)
151062 - BIRD (VU & IA)
0 - BIRD (VU & IA)
0 - BIRD (VU & IA)
0 - BIRD (VU & IA)
0 - BIRD (VU & IA)
0 - BIRD (IA)
0 - BIRD (IA)
0 - INVERTEBRATE (VU)
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0 - BIRD (IA)
0 - BIRD (IA)
0 - BIRD (IA)
0 - BIRD (IA)
0 - BIRD (VU & IA)
0 - BIRD (EN)
4022 - BIRD (VU)
4023 - BIRD (OS)
0 - BIRD (IA (& VU at subsp. level))
4035 - MAMMAL (VU)
453 - MAMMAL (EN)
0 - BIRD (IA)
0 - BIRD (VU & IA)
0 - BIRD (VU & IA)
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24096 - BIRD (EN)
81999 - BIRD (EN)
0 - BIRD (EN)
0 - BIRD (EN)
0 - BIRD (EN)
0 - BIRD (EN)
0 - BIRD (EN)
95962 - BIRD (EN)
0 - BIRD (IA (& VU at subsp. level))
0 - BIRD (IA (& VU at subsp. level))
0 - BIRD (IA (& VU at subsp. level))
0 - BIRD (EN & IA)
0 - BIRD (EN & IA)
0 - BIRD (EN & IA)
0 - BIRD (OS)
0 - BIRD (OS)
0 - BIRD (OS)
0 - BIRD (OS)
0 - BIRD (OS)
0 - BIRD (IA (& VU at subsp. level))
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0 - BIRD (VU & IA)
0 - BIRD (VU & IA)
0 - BIRD (IA)
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21703 - BIRD (P4)
21704 - BIRD (P4)
21705 - BIRD (P4)
22056 - BIRD (P4)
22057 - BIRD (P4)
22058 - BIRD (P4)
22059 - BIRD (P4)
22060 - BIRD (P4)
22061 - BIRD (P4)

22066 - BIRD (P4)
3242 - BIRD (P4)
7730 - BIRD (P4)
7920 - BIRD (P4)
0 - BIRD (P4)

Key to conservation status ranking:

EX = Presumed Extinct
EN = Endangered
CR = Critically Endangered
VU = Vulnerable
P1-5 = Priority 1 to 5 fauna

4.1.4 Threatened and Priority Ecological Communities

This selected area may contain a threatened or priority ecological community. Advice should be sought from the Department of Biodiversity, Conservation and Attractions (DBCAs) before development occurs on this site. Further information on a TEC or PEC record can be obtained from DBCAs [Species and Communities Branch](#) by quoting the **Occ_Unique number** for that record.

For information to assist in referral, environmental assessment and compliance issues relating to TECs listed under the Commonwealth legislation, refer to the [Listing Advice](#) and/or [Conservation Advice and Recovery Plan](#). The Listing and/or Conservation Advice define the national ecological community and may include Key Diagnostic Characteristics, Condition Thresholds, Priority Research and Conservation Actions and additional considerations. For further information on EPBC Listed TECs, please go to the Department of the Environment and Energy website: [Threatened species and ecological communities page](#).

The following threatened and priority vegetation communities have been recorded within the selected area:

Occ_Unique number - State and Commonwealth classification

11628 - state=Priority 3, cmwth=Endangered, status=Threatened

11911 - state=Priority 3, cmwth=Endangered, status=Threatened

14246 - state=Priority 3, cmwth=Endangered, status=Threatened

The following threatened and priority vegetation communities have been recorded within 20km of the selected area. Use the information to seek advice from the Department of Biodiversity, Conservation and Attractions:

Occ_Unique number - State and Commonwealth classification

252 - state=Data Deficient, cmwth=, status=Priority

11538 - state=Priority 3, cmwth=Endangered, status=Threatened

12308 - state=Priority 3, cmwth=Endangered, status=Threatened

12716 - state=Priority 3, cmwth=Endangered, status=Threatened

12717 - state=Priority 3, cmwth=Endangered, status=Threatened

12957 - state=Priority 3, cmwth=Endangered, status=Threatened

13002 - state=Priority 3, cmwth=Endangered, status=Threatened

13003 - state=Priority 3, cmwth=Endangered, status=Threatened

13230 - state=Priority 3, cmwth=Endangered, status=Threatened

15014 - state=Priority 3, cmwth=Endangered, status=Threatened

16223 - state=Priority 3, cmwth=Endangered, status=Threatened

16542 - state=Priority 3, cmwth=Endangered, status=Threatened

16696 - state=Priority 3, cmwth=Endangered, status=Threatened

16946 - state=Priority 3, cmwth=Endangered, status=Threatened

17087 - state=Priority 3, cmwth=Endangered, status=Threatened

17091 - state=Priority 3, cmwth=Endangered, status=Threatened

11467 - state=Priority 3, cmwth=Endangered, status=Threatened

12309 - state=Priority 3, cmwth=Endangered, status=Threatened

12310 - state=Priority 3, cmwth=Endangered, status=Threatened

12580 - state=Priority 3, cmwth=Endangered, status=Threatened

12581 - state=Priority 3, cmwth=Endangered, status=Threatened

14435 - state=Priority 3, cmwth=Endangered, status=Threatened

15013 - state=Priority 3, cmwth=Endangered, status=Threatened

15083 - state=Priority 3, cmwth=Endangered, status=Threatened

15084 - state=Priority 3, cmwth=Endangered, status=Threatened

15085 - state=Priority 3, cmwth=Endangered, status=Threatened

15086 - state=Priority 3, cmwth=Endangered, status=Threatened

15087 - state=Priority 3, cmwth=Endangered, status=Threatened

15148 - state=Priority 3, cmwth=Endangered, status=Threatened

15511 - state=Priority 3, cmwth=Endangered, status=Threatened

15512 - state=Priority 3, cmwth=Endangered, status=Threatened

15513 - state=Priority 3, cmwth=Endangered, status=Threatened

16179 - state=Priority 3, cmwth=Endangered, status=Threatened

16180 - state=Priority 3, cmwth=Endangered, status=Threatened

16181 - state=Priority 3, cmwth=Endangered, status=Threatened

16185 - state=Priority 3, cmwth=Endangered, status=Threatened

16541 - state=Priority 3, cmwth=Endangered, status=Threatened

16543 - state=Priority 3, cmwth=Endangered, status=Threatened

16720 - state=Priority 3, cmwth=Endangered, status=Threatened

16945 - state=Priority 3, cmwth=Endangered, status=Threatened

16947 - state=Priority 3, cmwth=Endangered, status=Threatened

17053 - state=Priority 3, cmwth=Endangered, status=Threatened
17054 - state=Priority 3, cmwth=Endangered, status=Threatened
17088 - state=Priority 3, cmwth=Endangered, status=Threatened
17089 - state=Priority 3, cmwth=Endangered, status=Threatened
17090 - state=Priority 3, cmwth=Endangered, status=Threatened
11393 - state=Priority 3, cmwth=Endangered, status=Threatened
11522 - state=Priority 3, cmwth=Endangered, status=Threatened
11523 - state=Priority 3, cmwth=Endangered, status=Threatened
11086 - state=Priority 3, cmwth=Endangered, status=Threatened
11087 - state=Priority 3, cmwth=Endangered, status=Threatened
11673 - state=Priority 3, cmwth=Endangered, status=Threatened
11985 - state=Priority 3, cmwth=Endangered, status=Threatened
12216 - state=Priority 3, cmwth=Endangered, status=Threatened
12595 - state=Priority 3, cmwth=Endangered, status=Threatened
13923 - state=Priority 3, cmwth=Endangered, status=Threatened
14106 - state=Priority 3, cmwth=Endangered, status=Threatened
14744 - state=Priority 3, cmwth=Endangered, status=Threatened
14879 - state=Priority 3, cmwth=Endangered, status=Threatened
14937 - state=Priority 3, cmwth=Endangered, status=Threatened
15090 - state=Priority 3, cmwth=Endangered, status=Threatened
15091 - state=Priority 3, cmwth=Endangered, status=Threatened
15219 - state=Priority 3, cmwth=Endangered, status=Threatened
15549 - state=Priority 3, cmwth=Endangered, status=Threatened
15552 - state=Priority 3, cmwth=Endangered, status=Threatened
15553 - state=Priority 3, cmwth=Endangered, status=Threatened
15684 - state=Priority 3, cmwth=Endangered, status=Threatened
15727 - state=Priority 3, cmwth=Endangered, status=Threatened
15904 - state=Priority 3, cmwth=Endangered, status=Threatened
16259 - state=Priority 3, cmwth=Endangered, status=Threatened
16262 - state=Priority 3, cmwth=Endangered, status=Threatened
16264 - state=Priority 3, cmwth=Endangered, status=Threatened
16265 - state=Priority 3, cmwth=Endangered, status=Threatened
16399 - state=Priority 3, cmwth=Endangered, status=Threatened
16400 - state=Priority 3, cmwth=Endangered, status=Threatened
16401 - state=Priority 3, cmwth=Endangered, status=Threatened
16647 - state=Priority 3, cmwth=Endangered, status=Threatened
11391 - state=Priority 3, cmwth=Endangered, status=Threatened
11392 - state=Priority 3, cmwth=Endangered, status=Threatened
11524 - state=Priority 3, cmwth=Endangered, status=Threatened
11542 - state=Priority 3, cmwth=Endangered, status=Threatened
11672 - state=Priority 3, cmwth=Endangered, status=Threatened
11674 - state=Priority 3, cmwth=Endangered, status=Threatened
11675 - state=Priority 3, cmwth=Endangered, status=Threatened
11676 - state=Priority 3, cmwth=Endangered, status=Threatened
11625 - state=Priority 3, cmwth=Endangered, status=Threatened
11900 - state=Priority 3, cmwth=Endangered, status=Threatened
11901 - state=Priority 3, cmwth=Endangered, status=Threatened
11963 - state=Priority 3, cmwth=Endangered, status=Threatened
11964 - state=Priority 3, cmwth=Endangered, status=Threatened
11986 - state=Priority 3, cmwth=Endangered, status=Threatened
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11988 - state=Priority 3, cmwth=Endangered, status=Threatened
11989 - state=Priority 3, cmwth=Endangered, status=Threatened
11990 - state=Priority 3, cmwth=Endangered, status=Threatened

13665 - state=Priority 3, cmwth=Endangered, status=Threatened
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13764 - state=Priority 3, cmwth=Endangered, status=Threatened
14743 - state=Priority 3, cmwth=Endangered, status=Threatened
14880 - state=Priority 3, cmwth=Endangered, status=Threatened
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14882 - state=Priority 3, cmwth=Endangered, status=Threatened
14992 - state=Priority 3, cmwth=Endangered, status=Threatened
15110 - state=Priority 3, cmwth=Endangered, status=Threatened
15123 - state=Priority 3, cmwth=Endangered, status=Threatened
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15551 - state=Priority 3, cmwth=Endangered, status=Threatened
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15905 - state=Priority 3, cmwth=Endangered, status=Threatened
15906 - state=Priority 3, cmwth=Endangered, status=Threatened
16197 - state=Priority 3, cmwth=Endangered, status=Threatened
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16261 - state=Priority 3, cmwth=Endangered, status=Threatened
16263 - state=Priority 3, cmwth=Endangered, status=Threatened
16266 - state=Priority 3, cmwth=Endangered, status=Threatened
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16398 - state=Priority 3, cmwth=Endangered, status=Threatened
16461 - state=Priority 3, cmwth=Endangered, status=Threatened
366 - state=De-list, cmwth=Endangered, status=Threatened
13832 - state=Priority 3, cmwth=Endangered, status=Threatened
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12215 - state=Priority 3, cmwth=Endangered, status=Threatened
12647 - state=Priority 3, cmwth=Endangered, status=Threatened
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12791 - state=Priority 3, cmwth=Endangered, status=Threatened
12895 - state=Priority 3, cmwth=Endangered, status=Threatened
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12792 - state=Priority 3, cmwth=Endangered, status=Threatened
12907 - state=Priority 3, cmwth=Endangered, status=Threatened
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12909 - state=Priority 3, cmwth=Endangered, status=Threatened
12911 - state=Priority 3, cmwth=Endangered, status=Threatened
13043 - state=Priority 3, cmwth=Endangered, status=Threatened
13165 - state=Priority 3, cmwth=Endangered, status=Threatened
13166 - state=Priority 3, cmwth=Endangered, status=Threatened
13167 - state=Priority 3, cmwth=Endangered, status=Threatened
13456 - state=Priority 3, cmwth=Endangered, status=Threatened
13810 - state=Priority 3, cmwth=Endangered, status=Threatened
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4.1.6 Carnaby's Cockatoo Habitat

Carnaby's cockatoo (*Calyptorhynchus latorostris*) is listed as 'fauna that is rare or likely to become extinct' (generally referred to as threatened fauna) under the Western Australian Wildlife Conservation Act 1950 Wildlife Conservation (Specially Protected Fauna) Notice 2011. It has been ranked as 'Endangered' under the Commonwealth *Environmental Protection and Biodiversity Conservation Act 1999*.

1.99 ha of the selected area is within a 'Confirmed' roosting area buffer.

4.2.2 Remnant Vegetation

This area contains remnant vegetation. The clearing of remnant native vegetation is prohibited unless a clearing permit is obtained from the Department of Environmental Regulation, or for an exempt purpose or activity under the [Environmental Protection \(Clearing of Native Vegetation\) Regulations 2004](#).

4.2.2.1 Environmental Protection (Clearing of Native Vegetation) Regulations 2004

To view the retention and protection status of Beard vegetation associations, download reports prepared by the [DBCA Statewide Vegetation Statistics](#).

The selected area retains native vegetation representative of the following Beard vegetation associations by IBRA 7.1 subregion (IBRA Subregion(Code) : Beard Association - approximate area in hectares):

Recherche(ESP02) : 42 : Shrublands; mallee & acacia scrub on south coastal dunes - 1.49 ha

4.2.2.4 Remnant Vegetation Within 10km of Selected Area

Area of remnant vegetation remaining within 10km of the selected area (local area vegetation retention). Land area is based on pre-European extent of Beard Vegetation Association mapping within the 10km buffer.

Veg area = 82.27 sqkm, land area = 173.30 sqkm. Percentage rem veg remaining = 47.47%

4.3 Surface Water

4.5 Regional Ecological Linkages

4.5.5 South Coast Macro Corridor Project Zones

This site is within the South Coast Macro Corridor Project.

The site contains the following zones (approximate area in hectares):

Strategic Zone A 1.99 ha

6 Priorities for Further Investigation

[back](#)

This information is available for the following regions:

Perth and Peel

Wheatbelt

Geraldton Regional Flora and Vegetation Survey study area

Legend

SWAE Boundaries

South West Australian Floristic Region

Transitional Zone

100km Buffer

Local Government Authority

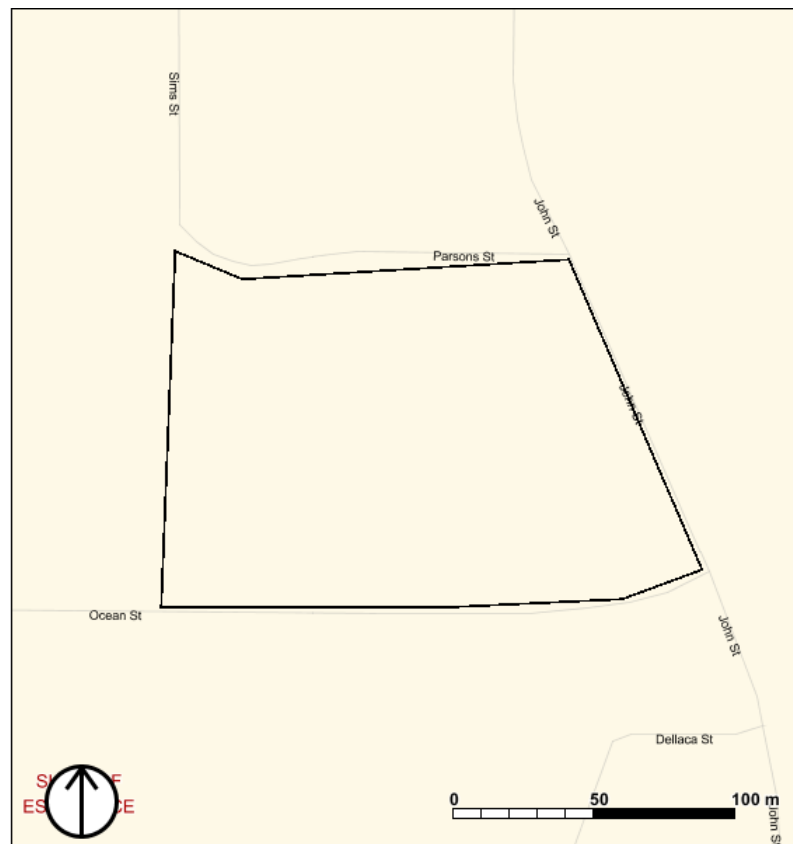
State Roads

Other Roads

Coast and Sea

water

land



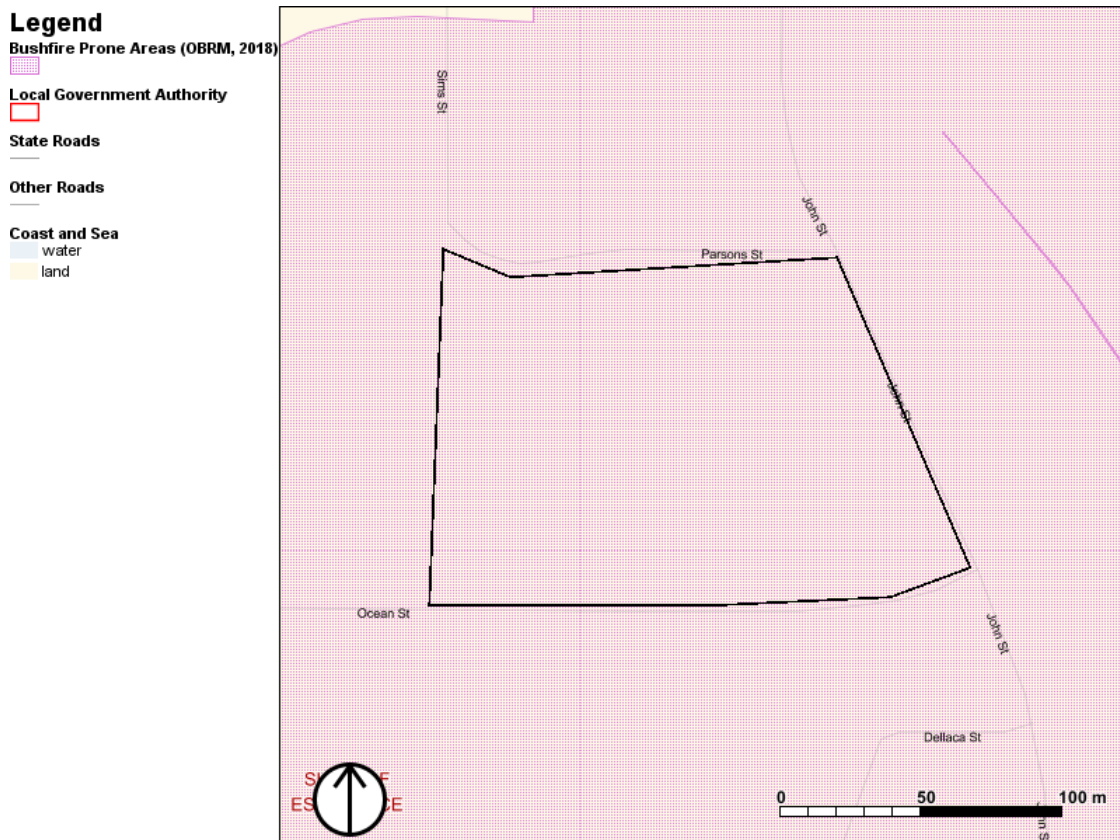
6.2 South West Ecoregion Initiative

The selected area is within the Southwest Australia Ecoregion study area. Refer to the mapping viewer for site specific information on potential conservation priorities.

7 Additional Considerations

[back](#)

Landscape character, soil systems, land capability and quality categories relevant to the selected site are not identified through this report. Check by turning on individual layers in the mapping viewer to access the relevant information or run a soils report.

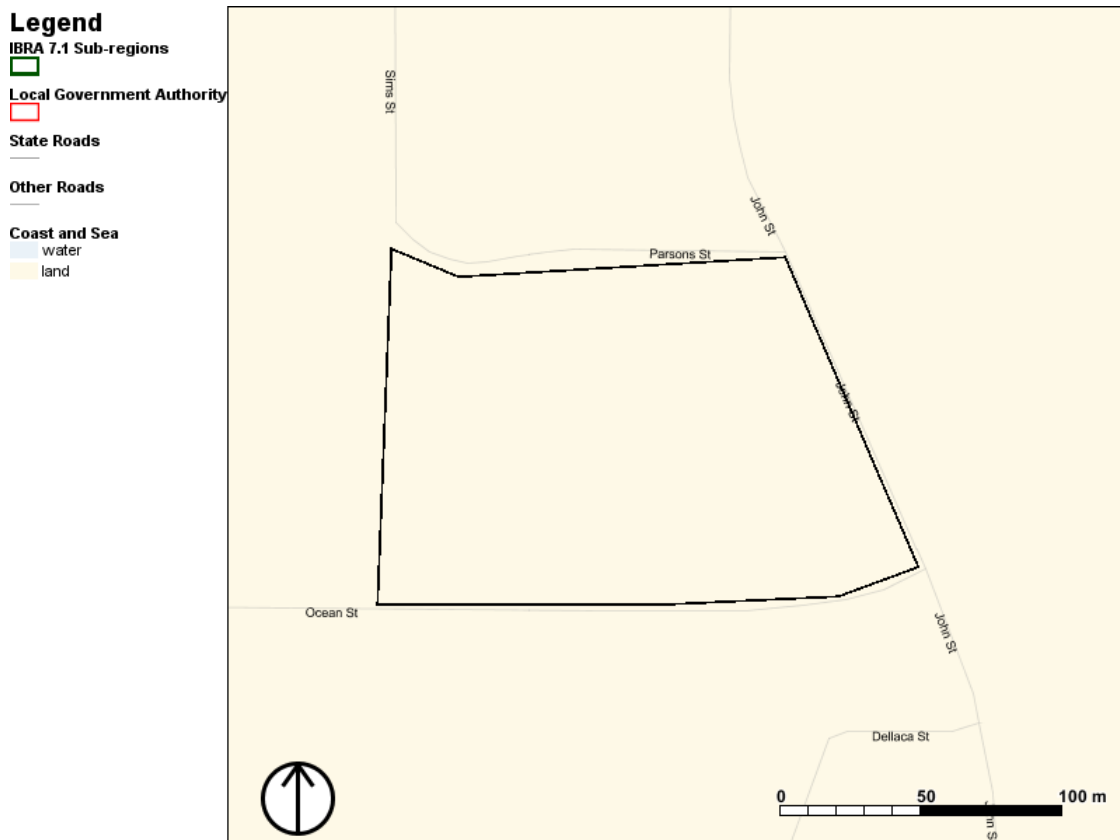


7.13 Bushfire Prone Area

1.99ha of the selected area is within a mapped Bushfire Prone Area (2018). Additional planning and building requirements may apply to developments within designated bush fire prone areas, in accordance with Schedule 2 Part 10A of the Planning and Development (Local Planning Schemes) Regulations 2015, State Planning Policy 3.7 Planning in Bushfire Prone Areas, the supporting Guidelines for Planning in Bushfire Prone Areas and the Building Code of Australia. Certain exemptions and exclusions may apply.

10 Administrative Boundaries

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10.1 Interim Biogeographic Regionalisation for Australia, Version 7.1 Sub-regions

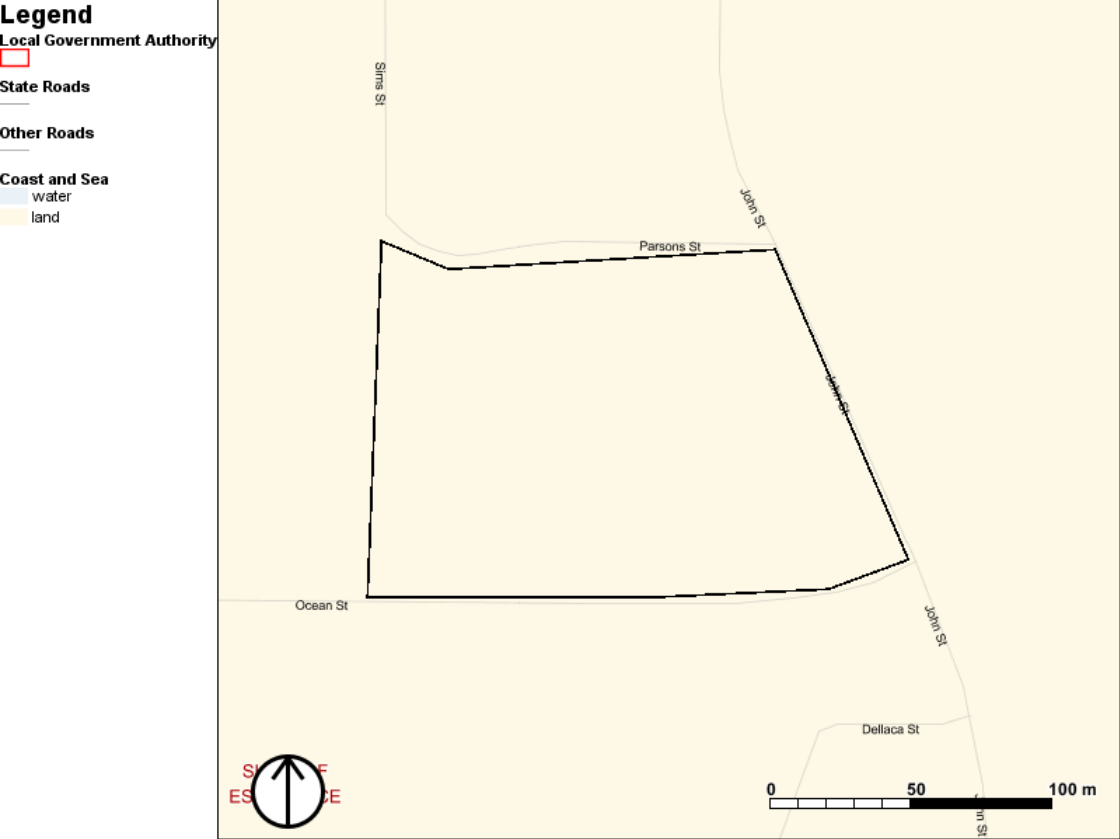
This selected area is within the following IBRA 7.1 Sub-regions.

Region / Sub-region(Sub-region code):

Esperance Plains / Recherche(ESP02) - 1.99 ha

11 Environmental Policy

[back](#)



11.2 Public Drinking Water Source Areas

The selected area is within the following Public Drinking Water Source Areas:

Esperance Water Reserve (P3)

11.4 RIWI Act Groundwater Areas and Subareas; Surface Water Areas and Irrigation Districts

The selected area is within the following RIWI Act areas:

**Groundwater Areas and Subareas:
Esperance Groundwater Area**



©Western Australian Land Information Authority (2019):
Cadastral/Property boundaries
Hydrography lines
Crown Reserves
Roads
Local Government Administrative Boundaries